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Expiration Date: July 1, 2009

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT No. WA-002449-0

State of Washington DEPARTMENT OF ECOLOGY Northwest Regional Office 3190 – 160th Avenue SE Bellevue, WA 98008-5452

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

CITY OF EVERETT

Utilities Division 3200 Cedar Street Everett, Washington 98201

<u>Plant Location:</u> <u>Receiving Water:</u>

4027 4th Street SE Snohomish River, Port Gardner Bay

Everett, Washington 98205

Water Body I.D. No.: Discharge Location:

WA-07-1010 Lagoon System (Outfall 015)
WA-PS-0030 Latitude: 48° 00' 15" N
Longitude: 122° 10' 38" W

Plant Type: Trickling Filter/Solids Contact System (Outfall 025)

Combined Aerated/Facultative and
Trickling Filter/Solids Contact

Latitude: 47° 59' 29" N

Longitude: 122° 10' 44" W

Port Gardner Bay (Outfall 100)

Latitude: 47° 58' 10" N Longitude: 122° 14' 48" W

is authorized to discharge in accordance with the Special and General Conditions that follow.

Kevin C. Fitzpatrick
Water Quality Section Manager
Northwest Regional Office
Washington State Department of Ecology

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SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S3.A.	Discharge Monitoring Report	Monthly	August 15, 2004
S3.E.	Noncompliance Notification	As necessary	
S3.F.	Shellfish Protection	As necessary	
S4.B.	Plans for Maintaining Adequate Capacity	As necessary	
S4.D.	Notification of New or Altered Sources	As necessary	
S4.E.	Infiltration and Inflow Evaluation	1/permit cycle	With application for renewal, January 1, 2009
S4.F.	Waste Load Assessment	1/permit cycle	With application for renewal, January 1, 2009
S5.G.	Operations and Maintenance Manual	As necessary	-
S6.A.5 /S6.C.	Pretreatment Report	1/year	April 1, 2005
S6.B.	Priority Pollutant Metals	4/year	With annual pretreatment report, May 1, 2004
S6.B.	Organic Priority Pollutants	1/year	With annual pretreatment report, May 1, 2004
S8.	Spill Plan	1/permit cycle	April 1, 2005
S9.A.	Effluent Mixing Plan of Study	Thirty (30) days prior to study	
S9.B.	Effluent Mixing Report	1/permit cycle	December 31, 2004
S10.A.	Acute Toxicity Characterization Data	2/permit cycle	June 1, 2005
S10.E.	Acute Toxicity Effluent Characterization with Permit Renewal Application	2/permit cycle	With application for renewal, January 1, 2009
S11.A.	Chronic Toxicity Characterization Data	2/permit cycle	June 1, 2005
S11.E.	Chronic Toxicity Effluent Characterization with Permit Renewal Application	2/permit cycle	With application for renewal, January 1, 2009
S12.A.	Chemical Analysis of Influent and Effluent	1/permit cycle	With application for renewal, January 1, 2009
S13.A.	Sediment Baseline Sampling and Analysis Plan	1/permit cycle	December 31, 2004
S13.B.	Sediment Data Report	1/permit cycle	December 31, 2005
S14.B.	Combined Sewer Overflow Report	Annually	December 31, 2004
S14.C.	Combined Sewer Overflow Reduction Plan Amendment	1/permit cycle	With application for renewal, January 1, 2009
G1.	Notice of Change in Authorization	As necessary	
G4.	Permit Application for Substantive Changes to the Discharge	As necessary	
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Application for Permit Renewal	1/permit cycle	January 1, 2009
G21.	Reporting Anticipated Noncompliance	As necessary	

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

A. <u>Interim Effluent Limitations – Low River Flow Period (August through September)</u>

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and until October 31, 2004, or the beginning of operation of the Port Gardner outfall, whichever occurs first, the Permittee is authorized to discharge treated municipal wastewater at the permitted locations during August and September subject to the following limitations:

EFFLUENT LIMITATIONS ^a : LAGOON OUTFALL #015					
Parameter	Average Monthly	Average Weekly			
Carbonaceous Biochemical Oxygen Demand ^b (5-day)	25 mg/L	40 mg/L			
Total Suspended Solids	60 mg/L	90 mg/L			
Fecal Coliform Bacteria	200/100 mL	400/100 mL			
pH ^c	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.				
Parameter	Average Monthly	Maximum Daily ^d			
Total Residual Chlorine	0.016 mg/L	0.083 mg/L			
EFFLUENT LIMITA	EFFLUENT LIMITATIONS ^a : TF/SC OUTFALL #025				
Parameter	Average Monthly	Average Weekly			
Carbonaceous Biochemical Oxygen Demand ^e (5-day)	25 mg/L	40 mg/L			
Total Suspended Solids ^f	30 mg/L	45 mg/L			
Fecal Coliform Bacteria	200/100 mL	400/100 mL			
pH ^c	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.				
Parameter	Average Monthly	Maximum Daily ^d			
Total Residual Chlorine	0.020 mg/L	0.095 mg/L			
EFFLUENT LIMITATIONS ^a : COMBINED OUTFALLS ^g #015 + 025					
Parameter	Average Monthly	Average Weekly			
Carbonaceous Biochemical Oxygen Demand (5-day)	2,380 lbs/day	3,570 lbs/day			
Total Suspended Solids	9,760 lbs/day	14,640 lbs/day			
Total Ammonia (as N)	3,880 lbs/day	5,820 lbs/day			

- ^a The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.
- ^b The average monthly effluent concentration for CBOD₅, from the Lagoon System (Outfall 015), shall not exceed 25 mg/L or 35 percent of the monthly average influent concentration, whichever is more stringent.
- ^c Indicates the range of permitted values. Effluent values for pH collected as single grab samples shall not exceed the limits of 6.0-9.0 where such values are attributable to inorganic industrial contributions.
- d The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.
- ^e The average monthly effluent concentration for CBOD₅, from the Trickling Filter/Solids Contact System (Outfall 025), shall not exceed 25 mg/L or 15 percent of the monthly average influent concentration, whichever is more stringent.
- f The average monthly effluent concentration for TSS, from the Trickling Filter/Solids Contact System (Outfall 025), shall not exceed 30 mg/L or 15 percent of the monthly average influent concentration, whichever is more stringent.
- ^g For the months of August and September, this permit contains a "bubble" allocation for the Lagoon System (Outfall 015) and the Trickling Filter/Solids Contact System (Outfall 025). The "bubble" allocation is listed under "Combined (015 + 025)" and is applicable to CBOD₅, TSS, and ammonia. Under the "bubble" allocation, a permit limit is defined to be violated when the CBOD₅, TSS, or ammonia mass loadings from the Lagoon System and the Trickling Filter/Solids Contact System exceed the permitted limit specified in "Combined (015 + 025)."

B. Interim Effluent Limitations – High River Flow Period (October through July)

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and until October 31, 2004, or the beginning of operation of the Port Gardner outfall, whichever occurs first, the Permittee is authorized to discharge treated municipal wastewater at the permitted locations during October through July subject to the following limitations:

0.095 mg/L

EFFLUENT LIMITATIONS ^a : LAGOON OUTFALL #015					
Parameter	Average Monthly Average Weekly				
Carbonaceous Biochemical Oxygen Demand (5-day)	25 mg/L 3,190 lbs/day	40 mg/L 5,100 lbs/day			
Total Suspended Solids	60 mg/L 7,660 lbs/day 90 mg/L 11,480 lbs/day				
Fecal Coliform Bacteria	200/100 mL 400/100 mL				
pH ^b	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.				
Parameter	Average Monthly Maximum Daily ^c				
Total Residual Chlorine	0.016 mg/L	0.083 mg/L			
EFFLUENT LIMITA	EFFLUENT LIMITATIONS ^a : TF/SC OUTFALL #025				
Parameter Average Monthly Average Wee					
Carbonaceous Biochemical Oxygen Demand ^d (5-day)	25 mg/L 3,340 lbs/day	40 mg/L 5,340 lbs/day			
Total Suspended Solids ^e	30 mg/L 4,000 lbs/day	45 mg/L 6,000 lbs/day			
Fecal Coliform Bacteria	200/100 mL	400/100 mL			
pH ^b	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.				
Parameter Average Monthly Maximum Daily ^c					

^a The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.

0.020 mg/L

Total Residual Chlorine

b Indicates the range of permitted values. Effluent values for pH collected as single grab samples shall not exceed the limits of 6.0-9.0 where such values are attributable to inorganic industrial contributions.

The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.

^d The average monthly effluent concentration for CBOD₅, from the Trickling Filter/Solids Contact System (Outfall 025), shall not exceed 25 mg/L or 15 percent of the monthly average influent concentration, whichever is more stringent.

^e The average monthly effluent concentration for TSS, from the Trickling Filter/Solids Contact System (Outfall 025), shall not exceed 30 mg/L or 15 percent of the monthly average influent concentration, whichever is more stringent.

C. Final Effluent Limitations – Low River Flow Period (July through October)

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on October 31, 2004, or the beginning of operation of the Port Gardner outfall, whichever occurs first, the Permittee is authorized to discharge treated municipal wastewater at the permitted locations during July, August, September, and October subject to the following limitations:

EFFLUENT LIMITATIONS ^a : LAGOON (River) OUTFALL #015			
Parameter	Average Monthly	Average Weekly	
Carbonaceous Biochemical Oxygen Demand ^b (5-day)	25 mg/L	40 mg/L	
Total Suspended Solids	60 mg/L 7,660 lbs/day	90 mg/L 11,480 lbs/day	
Fecal Coliform Bacteria	200/100 mL	400/100 mL	
pH ^c	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.		
Parameter	Average Monthly	Maximum Daily ^d	
Equivalent Carbonaceous Biochemical Oxygen Demand (5-day) ^e	3,043 lbs/day	5,402 lbs/day	
Total Residual Chlorine	0.016 mg/L	0.083 mg/L	
EFFLUENT LIMITATIONS	S ^a · TF/SC (Port Cardner)	OUTEALL #100	
Parameter	Average Monthly	Average Weekly	
Carbonaceous Biochemical Oxygen Demand (5-day) ^f	25 mg/L 3,340 lbs/day	40 mg/L 5,340 lbs/day	
Total Suspended Solids ^g	30 mg/L 4,000 lbs/day	45 mg/L 6,000 lbs/day	
Fecal Coliform Bacteria	200/100 mL	400/100 mL	
pH ^c	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.		
Total Residual Chlorine	0.5 mg/L	0.75 mg/L	

^a The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.

^b The average monthly effluent concentration for CBOD₅, from the Lagoon System (Outfall 015), shall not exceed 25 mg/L or 35 percent of the monthly average influent concentration, whichever is more stringent.

- ^c Indicates the range of permitted values. Effluent values for pH collected as single grab samples shall not exceed the limits of 6.0-9.0 where such values are attributable to inorganic industrial contributions.
- The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.
- ^e Equivalent CBOD (5-day) loading is defined by the following equation: Equivalent CBOD₅ (lbs./day) = CBOD₅ (lbs./day) + (2.1 * Ammonia [lbs./day]) Where CBOD₅ and total ammonia are measurements from the same daily composite sample.
- f The average monthly effluent concentration for CBOD₅, from the Trickling Filter/Solids Contact System (Outfall 100), shall not exceed 25 mg/L or 15 percent of the monthly average influent concentration, whichever is more stringent.
- The average monthly effluent concentration for TSS, from the Trickling Filter/Solids Contact System (Outfall 100), shall not exceed 30 mg/L or 15 percent of the monthly average influent concentration, whichever is more stringent.

There may be additional effluent limits for whole effluent toxicity (WET). Characterization studies which may trigger these limits are described in S10. Acute Toxicity and S11. Chronic Toxicity.

D. <u>Final Effluent Limitations – High River Flow Period (November through June)</u>

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on October 31, 2004, or the beginning of operation of the Port Gardner outfall, whichever occurs first, the Permittee is authorized to discharge treated municipal wastewater at the permitted locations during November through June subject to the following limitations:

EFFLUENT LIMITATIONS ^a : LAGOON (River) OUTFALL #015			
Parameter	Average Monthly	Average Weekly	
Carbonaceous Biochemical Oxygen Demand (5-day)	25 mg/L 3,190 lbs/day	40 mg/L 5,100 lbs/day	
Total Suspended Solids	60 mg/L 7,660 lbs/day	90 mg/L 11,480 lbs/day	
Fecal Coliform Bacteria	200/100 mL	400/100 mL	
рН ^с	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.		
Parameter	Average Monthly	Maximum Daily ^c	
Total Residual Chlorine	0.016 mg/L	0.083 mg/L	
EFFLUENT LIMITATIONS ^a : TF/SC (Port Gardner) OUTFALL #100			
Parameter	Average Monthly	Average Weekly	
Carbonaceous Biochemical Oxygen Demand ^d (5-day)	25 mg/L 3,340 lbs/day	40 mg/L 5,340 lbs/day	
Total Suspended Solids ^e	30 mg/L 4,000 lbs/day	45 mg/L 6,000 lbs/day	
Fecal Coliform Bacteria	200/100 mL	400/100 mL	
pH ^b	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.		
Total Residual Chlorine	0.5 mg/L	0.75 mg/L	

^a The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.

^b Indicates the range of permitted values. Effluent values for pH collected as single grab samples shall not exceed the limits of 6.0-9.0 where such values are attributable to inorganic industrial contributions.

^c The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.

^d The average monthly effluent concentration for CBOD₅, from the Trickling Filter/Solids Contact System (Outfall 100), shall not exceed 25 mg/L or 15 percent of the monthly average influent concentration, whichever is more stringent.

^e The average monthly effluent concentration for TSS, from the Trickling Filter/Solids Contact System (Outfall 100), shall not exceed 30 mg/L or 15 percent of the monthly average influent concentration, whichever is more stringent.

There may be additional effluent limits for whole effluent toxicity (WET). Characterization studies which may trigger these limits are described in S10. Acute Toxicity and S11. Chronic Toxicity.

E. <u>Mixing Zone Descriptions</u>

The maximum boundaries of the mixing zones are defined as follows:

Lagoon System (Outfall 015):

- 1. The width of the mixing zone is limited to 90 feet and is centered on the middle of the multi-port diffuser 180 feet from the east bank of the river at Mean Lower Low Water.
- 2. The length of the mixing zone downstream perpendicular to the outfall is 208 feet; the length of the mixing zone upstream perpendicular to the outfall is 208 feet. The Chronic Dilution Factor $DF_c = 14.2$.
- 3. The zone of acute criteria exceedance shall extend a distance of 20.8 feet in any horizontal direction from the diffuser and extends vertically to the surface at Mean Lower Low Water. The Acute Dilution Factor $DF_a = 6.4$.

Trickling Filter/Solids Contact System (Outfall 025):

- 1. The width of the mixing zone is limited to 105 feet and is centered on the middle of the multi-port diffuser 222.5 feet from the east bank of the river at Mean Lower Low Water.
- 2. The length of the mixing zone downstream perpendicular to the outfall is 216 feet; the length of the mixing zone upstream perpendicular to the outfall is 216 feet. The Chronic Dilution Factor $DF_c = 15.6$.
- 3. The zone of acute criteria exceedance shall extend a distance of 21.6 feet in any horizontal direction from the diffuser and extends vertically to the surface at Mean Lower Low Water. The Acute Dilution Factor $DF_a = 7.3$.

Port Gardner Bay Outfall (Outfall 100):

- 1. The mixing zone shall not extend in any horizontal direction from the discharge ports for a distance greater than two hundred feet plus the depth of water over the discharge ports as measured during mean lower low water.
- 2. A zone where acute criteria may be exceeded shall not extend beyond ten percent of the distance to the boundary of the mixing zone as measured independently from the discharge ports.

S2. MONITORING REQUIREMENTS

A. <u>Monitoring Schedule</u>

Category	Parameter	Sample Point	Sampling Frequency	Sample Type
Wastewater Influent	Flow	Influent	Continuous*	Measurement
	BOD ₅	Influent	1/week	24-hour Composite
	CBOD ₅	Influent	4/week	24-hour Composite
	TSS	Influent	4/week	24-hour Composite
Wastewater Effluent	Flow	Lagoon effluent	Continuous*	Measurement
	Flow	TF/SC effluent	Continuous*	Measurement
"	CBOD ₅	Lagoon effluent	4/week	24-hour Composite
	CBOD ₅	TF/SC effluent (above SEPS)	4/week	24-hour Composite
	TSS	Lagoon effluent	4/week	24-hour Composite
	TSS	TF/SC effluent (above SEPS)	4/week	24-hour Composite
"	Fecal Coliform Bacteria	Lagoon effluent	5/week	Grab
	Fecal Coliform Bacteria	TF/SC effluent (at SEPS or at K-C site)	5/week	Grab
	pН	Lagoon effluent	7/week	Grab
	pН	TF/SC effluent (above SEPS)	7/week	Grab
•	NH3-N	Lagoon effluent	4/week (July through October)	24-hour Composite
44	Total Residual Chlorine	Lagoon effluent	7/week	Grab
	Total Residual Chlorine	TF/SC effluent (at SEPS or at K-C site)	7/week	Grab
Pretreatment	As specified in Section S.6.			
Acute Toxicity Testing	As specified in Section S.10.			
Chronic Toxicity Testing	ty As specified in Section S.11.			

^{*} Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance.

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Department).

C. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three (3) years.

D. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during each monitoring period shall be summarized, reported, and submitted on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by the Department. DMR forms shall be received by the Department no later than the 15th day of the month

following the completed monitoring period, unless otherwise specified in this permit. Unless otherwise specified, priority pollutant analysis data shall be submitted no later than forty-five (45) days following the monitoring period. Unless otherwise specified, all toxicity test data shall be submitted within sixty (60) days after the sample date. The report(s) shall be sent to the Department of Ecology, Northwest Regional Office, 3190 - 160th Avenue SE, Bellevue, Washington 98008-5452.

All laboratory reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/number, method detection limit (MDL), laboratory practical quantitation limit (PQL), reporting units, and concentration detected.

Discharge Monitoring Report forms must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Department.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2 of this permit, then the results of such monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the terms and conditions of this permit due to any cause, the Permittee shall:

- 1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance, correct the problem and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to the Department within thirty (30) days after becoming aware of the violation;
- 2. Immediately notify the Department of the failure to comply; and
- 3. Submit a detailed, written report to the Department within thirty (30) days (five [5] days for upsets and bypasses), unless requested earlier by the Department. The report shall contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

F. Reporting - Shellfish Protection

Unauthorized discharges, such as collection system overflows, plant bypasses, or failure of the disinfection system, shall be reported <u>immediately</u> to the Department of Ecology and the Department of Health, Shellfish Program. The Department of Ecology's Northwest Regional Office 24-hour number is 425-649-7000, and the Department of Health's Shellfish 24-hour number is 360-236-3330.

S4. FACILITY LOADING

A. <u>Design Criteria</u>

Flows or waste loadings of the following design criteria for the permitted treatment facility shall not be exceeded:

Facility Design Flow

Maximum winter month: 31.3 mgd (total)

15.3 mgd (Lagoon) 16 mgd (TF/SC)

Average summer month: 23.7 mgd (combined total)

Influent BOD₅ Loading

Maximum winter month: 42,200 lbs./day Average summer month: 41,300 lbs./day

Influent TSS Loading

Maximum winter month: 58,400 lbs./day Average summer month 50,600 lbs./day

B. Plans for Maintaining Adequate Capacity

The Permittee shall submit to the Department a plan and a schedule for continuing to maintain capacity when:

- 1. The actual flow or waste load reaches 85 percent of any one of the design criteria in S4.A for three (3) consecutive months; or
- 2. When the projected increase would reach design capacity within five (5) years, whichever occurs first. If such a plan is required, it shall contain a plan and schedule for continuing to maintain capacity. The capacity as outlined in this plan must be sufficient to achieve the effluent limitations and other conditions of this permit. This plan shall address any of the following actions or any others necessary to meet the objective of maintaining capacity.
 - a. Analysis of the present design including the introduction of any process modifications that would establish the ability of the existing facility to achieve the effluent limits and other requirements of this permit at specific levels in excess of the existing design criteria specified in paragraph A above;
 - b. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system;
 - c. Limitation on future sewer extensions or connections or additional waste loads;
 - d. Modification or expansion of facilities necessary to accommodate increased flow or waste load;
 - e. Reduction of industrial or commercial flows or waste loads to allow for increasing sanitary flow or waste load.

Engineering documents associated with the plan must meet the requirements of WAC 173-240-060, "Engineering Report," and be approved by the Department prior to any construction. The plan shall specify any contracts, ordinances, methods for financing, or other arrangements necessary to achieve this objective.

C. <u>Duty to Mitigate</u>

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

D. Notification of New or Altered Sources

The Permittee shall submit written notice to the Department whenever any new discharge or a substantial change in volume or character of an existing discharge into the POTW is proposed which: (1) would interfere with the operation of, or exceed the design capacity of, any portion of the POTW; (2) is not part of an approved general sewer plan or approved plans and specifications; or (3) would be subject to pretreatment standards under 40 CFR Part 403 and Section 307(b) of the Clean Water Act. This notice shall include an evaluation of the POTW's ability to adequately transport and treat the added flow and/or waste load, the quality and volume of effluent to be discharged to the POTW, and the anticipated impact on the Permittee's effluent [40 CFR 122.42(b)].

E. Infiltration and Inflow Evaluation

- 1. The Permittee shall conduct an infiltration and inflow evaluation. Refer to the U.S. EPA publication, *I/I Analysis and Project Certification*, available as Publication No. 97-03 at: Publications Office, Department of Ecology, P.O. Box 47600, Olympia, WA 98504-7600. Plant monitoring records may be used to assess measurable infiltration and inflow.
- 2. A report shall be prepared which summarizes any measurable infiltration and inflow. If infiltration and inflow have increased by more than 15 percent from that found in the first report based on equivalent rainfall, the report shall contain a plan and a schedule for: (1) locating the sources of infiltration and inflow; and (2) correcting the problem.
- 3. The report shall be submitted with the NPDES permit renewal application.

F. Waste Load Assessment

The Permittee shall conduct an assessment of their flow and waste load and submit a report to the Department with the NPDES permit renewal application. The report shall contain the following: an indication of compliance or noncompliance with the permit effluent limitations; a comparison between the existing and design monthly average dry weather and wet weather flows, peak flows, BOD, and total suspended solids loadings. The report shall also state the present and design population or population equivalent, projected population growth rate, and the estimated date upon which the design capacity is projected to be reached, according to the most restrictive of the parameters above.

S5. OPERATION AND MAINTENANCE

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

A. Certified Operator

An operator certified for at least a Class IV plant by the state of Washington shall be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a Class III plant shall be in charge during all regularly scheduled shifts.

B. O & M Program

The Permittee shall institute an adequate operation and maintenance program for their entire sewage system. Maintenance records shall be maintained on all major electrical and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records shall clearly specify the frequency and type of maintenance recommended by the manufacturer and shall show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

C. Short-term Reduction

If a Permittee contemplates a reduction in the level of treatment that would cause a violation of permit discharge limitations on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee shall give written notification to the Department, if possible, thirty (30) days prior to such activities, detailing the reasons for, length of time of, and the potential effects of the reduced level of treatment. This notification does not relieve the Permittee of their obligations under this permit.

D. Electrical Power Failure

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes.

The Permittee shall maintain Reliability Class II (EPA 430-99-74-001) at the wastewater treatment plant, which requires a backup power source sufficient to operate all vital components and critical lighting and ventilation during peak wastewater flow conditions, except vital components used to support the secondary processes (i.e., mechanical aerators or aeration basin air compressors) need not be operable to full levels of treatment, but shall be sufficient to maintain the biota.

E. Prevent Connection of Inflow

The Permittee shall strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

F. <u>Bypass Procedures</u>

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited, and the Department may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, or 3) is applicable.

1. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass. The Permittee shall submit prior notice, if possible, at least ten (10) days before the date of the bypass.

2. Bypass which is unavoidable, unanticipated, and results in noncompliance of this permit.

This bypass is permitted only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
- b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.
- c. The Department is properly notified of the bypass as required in Condition S3E of this permit.

3. Bypass which is anticipated and has the potential to result in noncompliance of this permit

The Permittee shall notify the Department at least thirty (30) days before the planned date of bypass. The notice shall contain: (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with SEPA; (8) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

The Department will consider the following prior to issuing an Administrative Order for this type bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by Administrative Order issued by the Department under RCW 90.48.120.

G. Operations and Maintenance Manual

The approved *Operations and Maintenance Manual* shall be kept available at the treatment plant and all operators shall follow the instructions and procedures of this manual.

In addition to requirements of WAC 173-240-080 (1) through (5) the *O&M Manual* shall include:

- 1. Emergency procedures for plant shutdown and cleanup in event of wastewater system upset or failure;
- 2. Wastewater system maintenance procedures that contribute to the generation of process wastewater;
- 3. Any directions to maintenance staff when cleaning, or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (e.g., defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine); and
- 4. The treatment plant process control monitoring schedule.

The *O&M Manual* shall be reviewed by the Permittee at least annually. Substantial changes or updates to the *O&M Manual* shall be submitted to the Department whenever they are incorporated into the manual.

S6. PRETREATMENT

A. General Requirements

- 1. The Permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved pretreatment program submittal entitled, "Industrial Pretreatment Program" and dated November 25, 1986; any approved revisions thereto; and the General Pretreatment Regulations (40 CFR Part 403). At a minimum, the following pretreatment implementation activities shall be undertaken by the Permittee:
 - a. Enforce categorical pretreatment standards promulgated pursuant to Section 307(b) and (c) of the Federal Clean Water Act (hereinafter, the Act), prohibited discharge standards as set forth in 40 CFR 403.5, local limitations specified in Section 2.4 of Ordinance #2034-95, as amended, or state standards, whichever are most stringent or apply at the time of issuance or modification of a local industrial waste discharge permit. Locally derived limitations shall be defined as pretreatment standards under Section 307(d) of the Act and shall not be limited to categorical industrial facilities.

- b. Issue industrial waste discharge permits to all significant industrial users [SIUs, as defined in 40 CFR 403.3(t)(i)(ii)] contributing to the treatment system, including those from other jurisdictions. Industrial waste discharge permits shall contain, as a minimum, all the requirements of 40 CFR 403.8 (f)(l)(iii). The Permittee shall coordinate the permitting process with the Department regarding any industrial facility, which may possess a state waste discharge permit issued by the Department. Once issued, an industrial waste discharge permit will take precedence over a state-issued waste discharge permit.
- c. Maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by industrial users to the POTW. Records shall be maintained for at least a three (3)-year period.
- d. Perform inspections, surveillance, and monitoring activities on industrial users to determine and/or confirm compliance with applicable pretreatment standards and requirements. A thorough inspection of SIUs shall be conducted annually. Frequency of regular local monitoring of SIU wastewaters shall normally be commensurate with the character and volume of the wastewater but shall not be less than once per year. Sample collection and analysis shall be performed in accordance with 40 CFR Part 403.12(b)(5)(ii)-(v) and 40 CFR Part 136.
- e. Enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements. Once violations have been identified, the Permittee shall take timely and appropriate enforcement action to address the noncompliance. The Permittee's action shall follow its enforcement response procedures and any amendments, thereof.
- f. Publish, at least annually, in the largest daily newspaper in the Permittee's service area, a list of all nondomestic users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR 403.8(f)(2)(vii).
- g. If the Permittee elects to conduct sampling of a SIU's discharge in lieu of the user self-monitoring, it shall sample and analyze for all regulated pollutants in accordance with 40 CFR Part 403.12(b)(5)(ii)-(v), 40 CFR 403.12(g), and 40 CFR Part 136. The character and volume of the samples shall be representative of the discharge and shall provide adequate data to determine compliance, but in no case should sampling occur less than two (2) times per year.

- h. Develop and maintain a data management system designed to track the status of the Permittee's industrial user inventory, industrial user discharge characteristics, and compliance status.
- i. Maintain adequate staff, funds, and equipment to implement its pretreatment program.
- j. Establish, where necessary, contracts or legally binding agreements with contributing jurisdictions to ensure compliance with applicable pretreatment requirements by commercial or industrial users within these jurisdictions. These contracts or agreements shall identify the agency responsible for the various implementation and enforcement activities to be performed in the contributing jurisdiction. In addition, the Permittee shall be required to develop a Memorandum of Understanding (or Interlocal Agreement) that outlines the specific roles, responsibilities, and pretreatment activities of each jurisdiction.
- 2. The Permittee shall implement the Accidental Spill Prevention Program described in the approved Industrial Pretreatment Program dated November 25, 1986.
- 3. The Permittee shall evaluate, at least once every two years, whether each Significant Industrial User needs a plan to control slug discharges. For purposes of this subsection, a slug discharge is any discharge of a nonroutine, episodic nature, including but not limited to an accidental spill or noncustomary batch discharge. The results of such activities shall be available to the Department upon request. If the Permittee decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:
 - a. Description of discharge practices, including nonroutine batch discharges;
 - b. Description of stored chemicals;
 - c. Procedures for immediately notifying the Permittee of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five (5) days;
 - d. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment necessary for emergency response.

4. Whenever it has been determined, on the basis of information provided to or obtained by the Department, that any waste source contributes pollutants to the Permittee's treatment works in violation of Subsection (b), (c), or (d) of Section 307 of the Act, and the Permittee has not taken adequate corrective action, the Department shall notify the Permittee of this determination. Failure by the Permittee to commence an appropriate enforcement action within thirty (30) days of this notification may result in appropriate enforcement action by the Department against the source and/or the Permittee.

5. Pretreatment Report

The Permittee shall provide to the Department an annual report that briefly describes its program activities during the previous calendar year. This report shall be submitted no later than April 1 of each year to: Washington State Department of Ecology, Northwest Regional Office, 3190 - 160th Avenue SE, Bellevue, WA 98008-5452.

The report shall include the following information:

- a. An industrial survey update;
- b. Results of wastewater sampling at the treatment plant as specified in S.6.B. The Permittee shall calculate removal rates for each pollutant and evaluate the adequacy of the existing local limitations in Section 2.4 of Ordinance #2247-97, as amended, in prevention of treatment plant interference, pass-through of pollutants that could affect receiving water quality, and sludge contamination;
- c. Status of program implementation, including:
 - (1) Any substantial modifications to the pretreatment program as originally approved by the Department, including staffing and funding levels;
 - (2) Any interference, upset, or permit violations experienced at the POTW that are directly attributable to wastes from industrial users;
 - (3) Listing of industrial users inspected and/or monitored, and a summary of the results;
 - (4) Listing of industrial users scheduled for inspection and/or monitoring for the next year, and expected frequencies;

- (5) Listing of industrial users notified of promulgated pretreatment standards and/or local standards as required in 40 CFR 403.8(f)(2)(iii). Indicate which industrial users are on compliance schedules and the final date of compliance for each;
- (6) Listing of industrial users issued industrial waste discharge permits; and
- (7) Planned changes in the pretreatment program implementation plan. (See subsection A.6. below.)
- d. Status of compliance activities, including:
 - (1) Listing of industrial users that failed to submit baseline monitoring reports or any other reports required under 40 CFR 403.12 and in Section 1 of the Permittee's pretreatment program, dated November 25, 1986.
 - (2) Listing of industrial users that were at any time during the reporting period not complying with federal, state, or local pretreatment standards or with applicable compliance schedules for achieving those standards, and the duration of such noncompliance.
 - (3) Summary of enforcement activities and other corrective actions taken or planned against noncomplying industrial users. The Permittee shall supply to the Department a copy of the public notice of facilities that were in significant noncompliance.
- 6. The Permittee shall request and obtain approval from the Department prior to implementing any significant changes to the local pretreatment program as approved. The procedure of 40 CFR 403.18 (b) & (c) shall be followed.

B. <u>Monitoring Requirements</u>

The Permittee shall monitor its influent, effluent, and sludge for the priority pollutants identified in Tables II and III of Appendix D of 40 CFR Part 122 as amended, any compounds identified as a result of Condition S6.B.4, and any other pollutants expected from nondomestic sources using U.S. EPA-approved procedures for collection, preservation, storage, and analysis. Influent, effluent, and sludge samples shall be tested for the priority pollutant metals (Table III, 40 CFR 122, Appendix D) on a quarterly basis throughout the term of this permit. Influent, effluent, and sludge samples shall be tested for the organic priority pollutants (Table II, 40 CFR 122, Appendix D) on an annual basis. The sludge sample for pretreatment program purposes shall be taken from the TF/SC waste secondary sludge process.

1. The POTW influent and effluent shall be sampled on a day when industrial discharges are occurring at normal to maximum levels. Samples for the analysis of acid and base/neutral extractable compounds and metals shall be 24-hour composites. Samples for the analysis of volatile organic compounds shall be collected using grab sampling techniques at equal intervals for the total of four grab samples per day.

A single analysis for volatile pollutants (Method 624) may be run for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than 1 ml of each grab included in the composite.

Unless otherwise indicated, all reported test data for metals shall represent the total amount of the constituent present in all phases, whether solid, suspended, or dissolved, elemental or combined including all oxidation states. Metals in the influent and effluent shall be reported as "total recoverable."

Wastewater samples must be handled, prepared, and analyzed by GC/MS in accordance with the U.S. EPA Methods 624 and 625 (October 26, 1984).

- 2. A sludge sample shall be collected concurrent with a wastewater sample and may be taken as a single grab of residual sludge. Sampling and analysis shall conform to U.S. EPA Methods 624 and 625 unless the Permittee requests an alternate method and it has been approved by the Department.
- 3. Cyanide, phenols, and oils shall be taken as grab samples. Oils shall be hexane soluble or equivalent, and should be measured in the influent and effluent only.
- 4. In addition to quantifying pH, oil and grease, and all priority pollutants, a reasonable attempt should be made to identify all other substances and quantify all pollutants shown to be present by gas chromatograph/mass spectrometer (GC/MS) analysis per 40 CFR 136, Appendix A, Methods 624 and 625. Determinations of pollutants should be attempted for each fraction, which produces identifiable spectra on total ion plots (reconstructed gas chromatograms). Determinations should be attempted from all peaks with responses 5% or greater than the nearest internal standard. The 5% value is based on internal standard concentrations of 30 µg/l, and must be adjusted downward if higher internal standard concentrations are used or adjusted upward if lower internal standard concentrations are used. Nonsubstituted aliphatic compounds may be expressed as total hydrocarbon content. Identification shall be attempted by a laboratory whose computer data processing programs are capable of comparing sample mass spectra to a computerized library of mass spectra, with visual confirmation by an experienced analyst. For all detected substances which are determined to be pollutants, additional sampling and appropriate testing shall be conducted to determine concentration and variability, and to evaluate trends.

C. Reporting of Monitoring Results

The Permittee shall include a summary of monitoring results in the Annual Pretreatment Report.

All laboratory reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/number, method detection limit (MDL), laboratory practical quantitation limit (PQL), reporting units, and concentration detected.

D. <u>Local Limit Development</u>

As sufficient data become available, the Permittee shall, in consultation with the Department, reevaluate their local limits in order to prevent pass-through or interference. Upon determination by the Department that any pollutant present causes pass-through or interference, or exceeds established sludge standards, the Permittee shall establish new local limits or revise existing local limits as required by 40 CFR 403.5. In addition, the Department may require revision or establishment of local limits for any pollutant discharged from the POTW that has a reasonable potential to exceed the water quality standards, sediment standards, or established effluent limits, or causes whole effluent toxicity. The determination by the Department shall be in the form of an Administrative Order.

The Department may modify this permit to incorporate additional requirements relating to the establishment and enforcement of local limits for pollutants of concern. Any permit modification is subject to formal due process procedures pursuant to state and federal law and regulation.

S7. RESIDUAL SOLIDS

Residual solids include screenings, grit, scum, primary sludge, waste secondary sludge, and other residuals of the wastewater treatment process. The Permittee shall store and handle all residual solids in such a manner so as to prevent their entry into state ground or surface waters. The Permittee shall not discharge leachate from residual solids to state surface or ground waters.

S8. SPILL PLAN

By April 1, 2005, the Permittee shall submit to the Department a Spill Control Plan for the prevention, containment, and control of spills or unplanned releases of chemicals stored at the treatment plant site. The Permittee shall review the plan at least annually and update as needed. Changes to the plan shall be sent to the Department. The plan and any supplements shall be followed throughout the term of the permit.

The Spill Control Plan shall include the following:

- A description of operator training to implement the plan.
- A description of the reporting system which will be used to alert responsible managers and legal authorities in the event of a spill.
- A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) which prevent, contain, or treat spills of these materials.
- A list of all oil and petroleum products, materials, which when spilled, or otherwise released into the environment, are designated Dangerous Waste (DW) or Extremely Hazardous Waste (EHW) by the procedures set forth in WAC 173-303-070, or other materials which may become pollutants or cause pollution upon reaching state's waters.
- Plans and manuals required by 40 CFR Part 112, contingency plans required by Chapter 173-303 WAC, or other plans required by other agencies which meet the intent of this section may be submitted.

S9. EFFLUENT MIXING STUDY

A. <u>General Requirements</u>

This section applies only to the Port Gardner outfall, which is scheduled to begin operation in September 2004.

The Permittee shall determine the degree of effluent and receiving water mixing which occurs within the mixing zone (as defined in permit Condition S1.E). The degree of mixing shall be determined during critical conditions, as defined in WAC 173-201A-020 Definitions - "Critical Condition," or as close to critical conditions as reasonably possible.

The critical condition scenarios shall be established in accordance with *Guidance* for Conducting Mixing Zone Analyses (Ecology, 1996). The dilution ratio shall be measured in the field with dye using study protocols specified in the *Guidance*, Section 5.0 "Conducting a Dye Study," as well as other protocols listed in subpart C Protocols. The use of mixing models is an acceptable alternative or adjunct to a dye study if the critical ambient conditions necessary for model input are known or will be established with field studies; and if the diffuser is visually inspected for integrity or has been recently tested for performance by the use of tracers. The *Guidance* mentioned above shall be consulted when choosing the appropriate model. The use of models is also required if critical condition scenarios that need to be examined are quite different from the set of conditions present during the dye study.

Validation (and possibly calibration) of a model may be necessary and shall be done in accordance with the *Guidance* mentioned above, in particular, Subsection 5.2 "Quantify Dilution." The resultant dilution ratios for acute and chronic boundaries shall be applied in accordance with directions found in Ecology's *Permit Writer's Manual* (1994), in particular, Chapter VI.

A plan of study shall be submitted to the Department for review thirty (30) days prior to initiation of the effluent mixing study. The Study Plan developed by Kimberly-Clark for the Port Gardner Outfall may fulfill this requirement if Everett WWTP effluent flows are included.

B. Reporting Requirements

If the Permittee has information on the background physical conditions or background concentration of chemical substances (for which there are criteria in Chapter 173-201A WAC) in the receiving water, this information shall be submitted to the Department as part of the Effluent Mixing Report.

The results of the effluent mixing study shall be included in the Effluent Mixing Report, which shall be submitted to the Department for approval no later than December 31, 2004. The effluent Mixing Study Report developed by Kimberly-Clark for the Port Gardner Outfall may fulfill this requirement if the Everett WWTP effluent flows are included.

If the results of the mixing study, toxicity tests, and chemical analysis indicate that the concentration of any pollutant(s) exceeds or has a reasonable potential to exceed the State Water Quality Standards, Chapter 173-201A WAC, the Department may issue a regulatory order to require a reduction of pollutants or modify this permit to impose effluent limitations to meet the water quality standards.

The Permittee shall use some method of fixing and reporting the location of the outfall and mixing zone boundaries [i.e., triangulation off the shore, microwave navigation system, or using Global Positioning System (GPS) coordinates]. The method of fixing station location and the actual station locations shall be identified in the report.

C. Protocols

The Permittee shall determine the dilution ratio using protocols outlined in the following references, approved modifications thereof, or by another method approved by the Department:

- Akar, P.J. and G.H. Jirka, Cormix2: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Multiport Diffuser Discharges, USEPA Environmental Research Laboratory, Athens, GA, Draft, July 1990.
- Baumgartner, D. J.; W.E. Frick; P. J. W. Roberts; and C. A. Bodeen, *Dilution Models for Effluent Discharges*, USEPA, Pacific Ecosystems Branch, Newport, OR, 1993.

- Doneker, R. L. and G. H. Jirka, *Cormix1: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Submerged Single Port Discharges*, USEPA, Environmental Research Laboratory, Athens, GA, EPA/600-3-90/012, 1990.
- Ecology, *Permit Writer's Manual*, Water Quality Program, Department of Ecology, Olympia, WA 98504, July 1994, including most current addenda.
- Ecology, Guidance for Conducting Mixing Zone Analyses, Permit Writer's Manual, (Appendix 6.1), Water Quality Program, Department of Ecology, Olympia, WA 98504, October 1996.
- Kilpatrick, F. A., and E. D. Cobb, <u>Measurement of Discharge Using Tracers</u>, Chapter A16, *Techniques of Water-Resources Investigations of the USGS*, Book 3, Application of Hydraulics, USGS, U.S. Department of the Interior, Reston, VA 1985.
- Wilson, J. F., E. D. Cobb, and F. A. Kilpatrick, <u>Fluorometric Procedures for Dye Tracing</u>, Chapter A12. *Techniques of Water-Resources Investigations of the USGS*, *Book 3*, *Application of Hydraulics*, USGS, U.S. Department of the Interior, Reston, VA 1986.

S10. ACUTE TOXICITY

A. <u>Effluent Characterization</u>

The Permittee shall conduct acute toxicity testing on the final effluent from the lagoon system and from the TF/SC system to determine the presence and amount of acute (lethal) toxicity. The two acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Effluent characterization for acute toxicity shall be conducted during March and September of 2005. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. A dilution series consisting of a minimum of five concentrations and a control shall be used to estimate the concentration lethal to 50% of the organisms (LC₅₀). The percent survival in 100% effluent shall also be reported.

Written reports shall be submitted to the Department by June 1, 2005, and December 1, 2005.

Acute toxicity tests shall be conducted with the following species and protocols:

1. Fathead minnow, *Pimephales promelas* (96-hour static-renewal test, method: EPA/600/4-90/027F).

2. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48-hour static test, method: EPA/600/4-90/027F). The Permittee shall choose one of the three species and use it consistently throughout effluent characterization.

B. <u>Effluent Limit for Acute Toxicity</u>

The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

- 1. The median survival of any species in 100% effluent is below 80%, or
- 2. Any one test of any species exhibits less than 65% survival in 100% effluent.

If an effluent limit for acute toxicity is required by Subsection B at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F.

If no effluent limit is required by Subsection B at the end of one year of effluent characterization, then the Permittee shall complete all applicable requirements in Subsections E and F.

The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).

In the event of failure to pass the test described in Subsection C of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in Subsection D are being met to the satisfaction of the Department.

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-100. The zone of acute criteria exceedance for the lagoon system is authorized in Section S.1.E of this permit. The ACEC for the lagoon system equals 15.6% effluent.

The ACEC of the TF/SC system effluent discharged through the Port Gardner outfall will be determined as a component of S9. EFFLUENT MIXING STUDY of this permit.

If the Permittee has an effluent limit for acute toxicity and the ACEC is not known, then effluent characterization for acute toxicity shall continue until the time an ACEC is known. Effluent characterization shall be continued until an ACEC has been determined and shall be performed using each one of the tests listed in Subsection A on a rotating basis. When an ACEC has been determined, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F.

If no effluent limit is required by Subsection B at the end of one year of effluent characterization, then the Permittee shall stop effluent characterization and begin to conduct the activities in Subsection E even if the ACEC is unknown.

C. <u>Monitoring for Compliance With an Effluent Limit for Acute Toxicity</u>

Monitoring to determine compliance with the effluent limit shall be conducted biannually for the remainder of the permit term using each of the species listed in Subsection A on a rotating basis and performed using at a minimum 100% effluent, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100% effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement Subsection D if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance With an Effluent Limit for Acute Toxicity

If the Permittee violates the acute toxicity limit in Subsection B, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. Testing shall determine the LC_{50} and effluent limit compliance. The discharger shall return to the original monitoring frequency in Subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the fourth additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first three additional compliance monitoring tests failed to meet the acute toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the acute toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Acute Toxicity

The Permittee shall test final effluent from the lagoon system and from the TF/SC system once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial acute effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

- 2. Testing shall be conducted on 24-hour composite effluent samples. Composite samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within 4 hours after collection, it must be below 12° C at receipt. All other samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.
- 3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof.
- 4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
- 5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.
- 6. Effluent samples for whole effluent toxicity testing shall be collected just prior to the chlorination step in the treatment process.
- 7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.
- 8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing, and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020, must be repeated on a fresh sample with an increased number of replicates to increase the power.

S11. CHRONIC TOXICITY

A. Effluent Characterization

The Permittee shall conduct chronic toxicity testing on the final effluent from the lagoon system and from the TF/SC system. The two chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

For the Snohomish River discharge:

Effluent testing for chronic toxicity shall be conducted during March and September of 2005. The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent in order to determine appropriate point estimates. This series of dilutions shall include the ACEC. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

For the Port Gardner Bay discharge:

Effluent testing for chronic toxicity shall be conducted during March and September of 2005, or biannually until an acute critical effluent concentration (ACEC) is determined, if that determination takes longer than one year (see S10.B. Effluent Limit for Acute Toxicity for a definition of the ACEC). The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent in order to determine appropriate point estimates. The chronic no observed effects concentration (NOEC) will also be determined for comparison to the ACEC when the ACEC is known. If the ACEC is determined before the one year of characterization is over, the Permittee shall include the ACEC in the concentration series of all subsequent tests and compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001. If the ACEC is unknown at the end of one year of effluent characterization, the Permittee shall continue the effluent characterization until an ACEC has been determined. Toxicity testing conducted during an effluent characterization extended past one year until an ACEC has been determined, shall be performed using each one of the tests listed in Subsection A on a rotating basis.

Chronic toxicity tests shall be conducted with the following two species and the most recent version of the following protocols:

Saltwater Chron	Method	
Topsmelt	Atherinops affinis	EPA/600/R-95/136
Mysid shrimp		EPA/600/R-95/136 or EPA/600/4-91/003

The Permittee shall use the West Coast mysid (*Holmesimysis costata*) for toxicity testing unless the lab cannot obtain a sufficient quantity of a West Coast species in good condition in which case the East Coast mysid (*Mysidopsis bahia*) may be substituted.

Written reports shall be submitted to the Department by June 1, 2005, and December 1, 2005.

B. <u>Effluent Limit for Chronic Toxicity</u>

For the Snohomish River discharge:

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted for effluent characterization shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001) and shall complete all applicable requirements in Subsections C, D, and F.

If no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only Subsections E and F apply.

The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).

In the event of failure to pass the test described in Subsection C of this section, for compliance with the effluent limit for chronic toxicity, the Permittee is considered to be in compliance with all permit requirements for chronic whole effluent toxicity as long as the requirements in Subsection D are being met to the satisfaction of the Department.

The CCEC means the maximum concentration of effluent allowable at the boundary of the mixing zone assigned in Section S1.E pursuant to WAC 173-201A-100. The CCEC equals 7.0% effluent.

For the Port Gardner Bay discharge:

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted under Subsection A results in an NOEC less than the ACEC or if any test shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001). The Permittee shall complete all applicable requirements in Subsections C, D, and F upon determining that an effluent limit for chronic toxicity applies to the discharge.

If no test resulted in a NOEC less than the ACEC or if no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only Subsections E and F apply.

The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).

The CCEC means the maximum concentration of effluent allowable at the boundary of a mixing zone assigned pursuant to WAC 173-201A-100. The CCEC will be determined as a component of S9. EFFLUENT MIXING STUDY of this permit.

C. <u>Monitoring for Compliance With an Effluent Limit for Chronic Toxicity</u>

Monitoring to determine compliance with the effluent limit shall be conducted biannually for the remainder of the permit term using each of the species listed in Subsection A on a rotating basis and performed using at a minimum the CCEC, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule.

Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The Permittee shall immediately implement Subsection D if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20%, the hypothesis test shall be conducted at the 0.01 level of significance.

In order to establish whether the chronic toxicity limit is eligible for removal from future permits, the Permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.

D. Response to Noncompliance With an Effluent Limit for Chronic Toxicity

If a toxicity test conducted for compliance monitoring under Subsection C determines a statistically significant difference in response between the CCEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted monthly for three consecutive months using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these effluent concentrations shall equal the CCEC and be compared statistically to the nontoxic control in order to determine compliance with the effluent limit for chronic toxicity as described in Subsection C. The discharger shall return to the original monitoring frequency in Subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for chronic toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the chronic toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the third additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first two additional compliance monitoring tests failed to meet the chronic toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the chronic toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. <u>Monitoring When There Is No Permit Limit for Chronic Toxicity</u>

The Permittee shall test final effluent from the lagoon system and from the TF/SC system once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial chronic effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

- 1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.
- 2. Testing shall be conducted on 24-hour composite effluent samples. Composite samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within 4 hours after collection, it must be below 12° C at receipt. All other samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.
- 3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof.
- 4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
- 5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.
- 6. Effluent samples for whole effluent toxicity testing shall be collected just prior to the chlorination step in the treatment process.

- 7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC.
- 8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing, and do not comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020, must be repeated on a fresh sample with an increased number of replicates to increase the power.

S12. ADDITIONAL CHEMICAL ANALYSIS OF INFLUENT AND EFFLUENT

A. <u>Additional Effluent Testing</u>

To provide required data for EPA Form 3510-2A, Part B6 (NPDES application) for the next permit cycle, the following tests must be conducted on the final plant effluent from the lagoon system and the TF/SC system. Samples shall be collected for analysis at least three times during the term of this permit, and results shall be reported with the next NPDES permit application.

Ammonia (as N)
Chlorine (Total Residual, TRC)
Dissolved Oxygen
Total Kjeldahl Nitrogen (TKN)
Nitrate plus Nitrite Nitrogen
Oil and Grease
Total Phosphorus
Total Dissolved Solids (TDS)

B. Protocols

Sample analysis shall be conducted in accordance with 40 CFR Part 136.

C. Quality Assurance/Quality Control Procedures

The Permittee shall follow the quality assurance procedures of 40 CFR Part 136.

S13. SEDIMENT MONITORING (MARINE)

A. Sediment Sampling and Analysis Plan

The Permittee shall submit to the Department for review and approval a Sediment Sampling and Analysis Plan for sediment monitoring no later than December 31, 2004. The purpose of the plan is to characterize sediment quality in the vicinity of the Permittee's Port Gardner bay outfall. The Permittee shall follow the guidance provided in the <u>Sediment Source Control Standards User Manual</u>, Appendix B: Sediment Sampling and Analysis Plan (Ecology, 1995).

The Sediment Sampling and Analysis Plan developed by Kimberly-Clark for the Port Gardner Bay outfall may be submitted to fulfill this requirement.

B. Sediment Data Report

Following Department approval of the Sediment Sampling and Analysis Plan, sediments will be collected and analyzed. The Permittee shall submit to the Department a Sediment Data Report containing the results of the sediment sampling and analysis by December 31, 2005. The Sediment Data Report shall conform with the approved Sampling and Analysis Plan.

The Sediment Data Report developed by Kimberly-Clark for the Port Gardner Bay outfall may be submitted to fulfill this requirement.

S14. COMBINED SEWER OVERFLOWS

A. <u>Discharge Locations</u>

The following is a list of combined sewer overflows (CSOs), which are occasional point sources of pollutants as a result of precipitation events. Discharges from these sites are prohibited except as a result of and during precipitation events. No authorization is given by this permit for discharge from a CSO that causes adverse impacts that threaten characteristic uses of the receiving water as identified in the water quality standards, Chapter 173-201A WAC.

Discharge Number	Discharge Name	CSO Designation	Receiving Water
005	13 th Street Overflow	PS01	Port Gardner Bay
006	Lift Station #2	PS08	Port Gardner Bay
007	24-inch South Bond Street	PS07	Port Gardner Bay
008	West Hewitt & Bond Street Overflow	PS06	Port Gardner Bay
009	Everett & Federal Avenue Overflow	PS05	Port Gardner Bay
011	Lift Station #5	PS04	Port Gardner Bay
012	15 th & Grand Street Overflow	PS03	Port Gardner Bay
013	Lift Station #7	PS02	Port Gardner Bay
016	Hayes Street Overflow	SR01	Snohomish River
017	Lift Station #9	SR02	Snohomish River
018	Siphon Headworks Overflow	SR03	Snohomish River
019	Everett, Chestnut, Harrison & Grand Overflow	SR04	Snohomish River
026	East Pacific Avenue Overflow & Bypass	SR07	Snohomish River
028	East 36 th Street Overflow & Bypass	SR08	Snohomish River

B. Combined Sewer Overflow Report

By December 31, 2004, and annually thereafter, the Permittee shall submit a CSO Report to the Department for review and approval, which complies with the requirements of WAC 173-245-090(1).

C. Combined Sewer Overflow Reduction Plan Amendment

In conjunction with the application for renewal of this permit, the Permittee shall submit an amendment of its CSO Reduction Plan to the Department for review and approval. The amendment shall comply with the requirements of WAC 173-245-090(2).

D. <u>Compliance Schedule</u>

In order to achieve the greatest reasonable reduction of combined sewer overflows at the earliest possible date, the following items shall be accomplished in accordance with the following schedule of milestone dates.

1. No later than December 31, 2008, submit final plans and specifications for the CSO treatment project at PS04, PS05, PS06, and PS07.

E. Nine Minimum Controls

In accordance with WAC 173-245 and US EPA CSO control policy (59 FR 18688), the Permittee must implement and document the following nine minimum controls (NMC) for CSOs. Compliance with the NMC shall be documented in the annual CSO report as required in S14.B.

The Permittee shall comply with the following technology-based requirements:

- 1. The Permittee shall implement proper operation and maintenance programs for the sewer system and all CSO outfalls to reduce the magnitude, frequency, and duration of CSOs. The program shall consider regular sewer inspections; sewer, catch basin, and regulator cleaning; equipment and sewer collection system repair or replacement, where necessary; and disconnection of illegal connections.
- 2. The Permittee shall implement procedures that will maximize use of the collection system for wastewater storage that can be accommodated by the storage capacity of the collection system in order to reduce the magnitude, frequency, and duration of CSOs.
- 3. The Permittee shall review and modify, as appropriate, its existing pretreatment program to minimize CSO impacts from the discharges from nondomestic users.

- 4. The Permittee shall operate the POTW treatment plant at maximum treatable flow during all wet weather flow conditions to reduce the magnitude, frequency, and duration of CSOs. The Permittee shall deliver all flows to the treatment plant within the constraints of the treatment capacity of the POTW.
- 5. Dry weather overflows from CSO outfalls are prohibited. Each dry weather overflow must be reported to the permitting authority as soon as the Permittee becomes aware of the overflow. When the Permittee detects a dry weather overflow, the Permittee shall begin corrective action immediately. The Permittee shall inspect the dry weather overflow each subsequent day until the overflow has been eliminated.
- 6. The Permittee shall implement measures to control solid and floatable materials in CSOs.
- 7. The Permittee shall implement a pollution prevention program focused on reducing the impact of CSOs on receiving waters.
- 8. The Permittee shall implement a public notification process to inform the citizens of when and where CSOs occur. The process must include (a) mechanism to alert persons of the occurrence of CSOs and (b) a system to determine the nature and duration of conditions that are potentially harmful for users of receiving waters due to CSOs.
- 9. The Permittee shall monitor CSO outfalls to characterize CSO impacts and the efficacy of CSO controls. This shall include collection of data that will be used to document the existing baseline conditions, evaluate the efficacy of the technology-based controls, and determine the baseline conditions upon which the long-term control plan will be based. These data shall include:
 - a. Characteristics of combined sewer system including the population served by the combined portion of the system and locations of all CSO outfalls in the CSS
 - b. Total number of CSO events and the frequency and duration of CSOs for a representative number of events
 - c. Locations and designated uses of receiving water bodies
 - d. Water quality data for receiving water bodies
 - e. Water quality impacts directly related to CSO (e.g., beach closing, floatables, wash-up episodes, fish kills).

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed and certified.

- A. All permit applications shall be signed by either a principal executive officer or a ranking elected official.
- B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1. The authorization is made in writing by a person described above and submitted to the Department.
 - 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
- C. Changes to authorization. If an authorization under paragraph B.2, above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2, above, must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
- B. To have access to and copy at reasonable times and at reasonable cost any records required to be kept under the terms and conditions of this permit.
- C. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor at reasonable times any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the Permittee) or upon the Department's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

- A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
 - 1. Violation of any permit term or condition.
 - 2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
 - 3. A material change in quantity or type of waste disposal.
 - 4. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR part 122.64(3)].
 - 5. A change in any condition that requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR part 122.64(4)].
 - 6. Nonpayment of fees assessed pursuant to RCW 90.48.465.
 - 7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

- B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
 - 1. A material change in the condition of the waters of the state.
 - 2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
 - 3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
 - 4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
 - 5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR part 122.62.
 - 6. The Department has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
 - 7. Incorporation of an approved local pretreatment program into a municipality's permit.
- C. The following are causes for modification or alternatively revocation and reissuance:
 - 1. Cause exists for termination for reasons listed in A1 through A7 of this section, and the Department determines that modification or revocation and reissuance is appropriate.
 - 2. The Department has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.

G4. REPORTING PLANNED CHANGES

The Permittee shall, as soon as possible, but no later than sixty (60) days prior to the proposed changes, give notice to the Department of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b);

- 2) a significant change in the nature or an increase in quantity of pollutants discharged; or
- 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, and the submittal of a new application or supplement to the existing application, along with required engineering plans and reports, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously

limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation of the terms and conditions of this permit.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least one hundred and eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee shall apply for permit renewal at least one hundred and eighty (180) days prior to the specified expiration date of this permit.

G8. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department.

A. <u>Transfers by Modification</u>

Except as provided in paragraph (B) below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. <u>Automatic Transfers</u>

This permit may be automatically transferred to a new Permittee if:

- 1. The Permittee notifies the Department at least thirty (30) days in advance of the proposed transfer date.
- 2. The notice includes a written agreement between the existing and new permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.

3. The Department does not notify the existing Permittee and the proposed new permittee of its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G9. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G10. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee shall submit to the Department, within a reasonable time, all information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also submit to the Department upon request, copies of records required to be kept by this permit.

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by the Department.

G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G16. UPSET

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset;

- 2) the permitted facility was being properly operated at the time of the upset;
- 3) the Permittee submitted notice of the upset as required in Condition S3.E; and
- 4) the Permittee complied with any remedial measures required under S4.C of this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G17. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G18. DUTY TO COMPLY

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G19. TOXIC POLLUTANTS

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G20. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two (2) years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

G21. REPORTING ANTICIPATED NONCOMPLIANCE

The Permittee shall give advance notice to the Department by submission of a new application or supplement thereto at least one hundred and eighty (180) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Department.

G22. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Department, it shall promptly submit such facts or information.

G23. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.